



# Sustainable Buildings SEPP

Non residential development  
Policy and digital systems update

**Presented by**  
Government Architect NSW for  
Department of Planning, Housing and Infrastructure

13 September 2023



An aerial photograph of Sydney, Australia, showing the central business district (CBD) and Hyde Park. The image is densely packed with buildings of various heights and styles, interspersed with green spaces and trees. The text "We are all, always, on Country." is overlaid in large, white, sans-serif font across the center of the image. The background shows a mix of modern skyscrapers and older, more traditional buildings, with a prominent green area in the middle ground.

**We are all,  
always, on  
Country.**

Gadigal Country, Hyde Park, Sydney CBD. Image: Destination NSW



**NSW**  
GOVERNMENT



# Today's speakers



**Abbie Galvin**

Government Architect  
New South Wales



**Jillian Hopkins**

Principal Design Advisor  
GANSW

## Today's session

Sustainable Buildings SEPP  
Policy Overview

5 Policy Provisions in Detail


Questions & Answers

# Responding to feedback

The session will be recorded and published on the website. We will also update FAQs.

## Sustainable Buildings SEPP

Frequently asked questions about the new policy  
August 2022



### Overview

In August 2022, the NSW Government released the new *State Environmental Planning Policy (Sustainable Buildings) 2022 (Sustainable Buildings SEPP)* and associated amendments to the *Environmental Planning and Assessment Regulations 2001* and the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021*.

The SEPP package will come into effect on 1 October 2023. The policy incorporates provisions from the State Environmental Planning Policy (Building Sustainability Index) BASIX 2004 (BASIX SEPP) and introduces new measures for non-residential buildings.

These Frequently Asked Questions will support industry, local government, and state agencies to implement the new policy.

### About the SEPP and Regulation

- 1. Why do we need a Sustainable Buildings SEPP and EP&A Regulation amendment?**

Together, the Sustainable Buildings SEPP and Regulation amendment will help the NSW Government deliver its commitments under the NSW Net Zero Plan stage 1: 2020-2030 and the national Trajectory for Low Energy Buildings. The SEPP is a first step in introducing sustainability measures for non-residential buildings and updating standards for residential buildings previously enabled through the BASIX SEPP and non-regulatory frameworks such as NABERS.

The SEPP sets out a framework for buildings in NSW to contribute to NSW's target of achieving net zero by 2050. The new provisions set out a modern, transparent and fair framework to support the delivery of sustainable buildings in NSW. The proposed SEPP is an important change for buildings in NSW to meet the net zero objectives. The new settings provide improved flexibility and the ability for industry to lead and respond to the requirement to achieve net zero emissions and move towards a circular economy.
- 2. When will it come into effect?**

The SEPP was notified on 29 August 2022 and will come into effect on 1 October 2023. Delayed commencement will allow the industry time to adjust to the new standards. The SEPP will be reviewed in 2025 and then every three years to ensure the building sector continues to contribute to NSW delivering on its net zero target in a staged manner.
- 3. Who has been consulted about the policy?**

The department has engaged a range of stakeholders on these policy initiatives including local government, peak bodies, environment groups, and industry groups representing developers, builders, designers, architects, and engineers and the sustainability sector. The increased BASIX standards were also publicly exhibited from December 2021- March 2022.

Can Councils set higher energy and water standards?

Does the SB SEPP require a Section J report to be prepared using the NABERS pathway?

What is the format for embodied emissions reporting?

How have heritage buildings been considered in the policy?

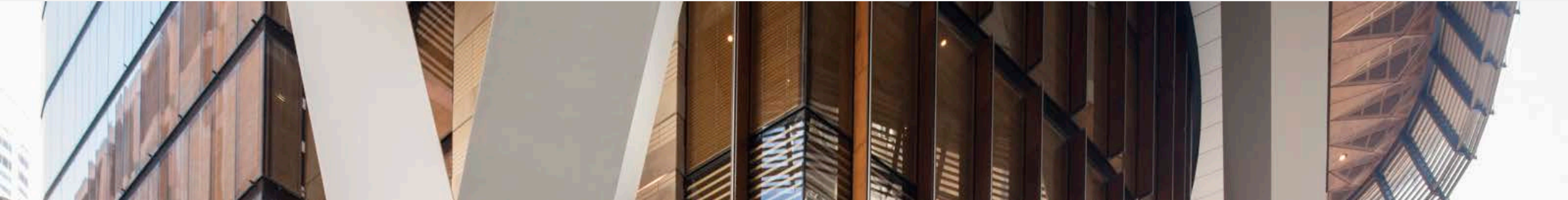
# Sustainable Buildings SEPP



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**Policy overview**  
September 2023

**Abbie Galvin**  
Government Architect NSW



# Policy statistics

The Sustainable Buildings SEPP will reduced emissions by:



**2.6 Mt**

Over ten years of the policy.



**8.5 million**

Trees planted (equivalent)



**1.6 million**

Vehicles off the road (equivalent)

Globally, buildings contribute to:

**38%**

Carbon emissions

**35%**

Energy consumption

**50%**

Resource consumption \*

\*World Green Building Council 2023

In Australia, by 2050:

**85%**

of Australia's built environment emissions will be from embodied carbon +

+Green Building Council of Australia 2023

# Policy aims

The shared aims of the Sustainable Buildings SEPP reflect NSW commitment to sustainable development.

**It can be considered the initial framework on which future policy initiatives can build.**

The policy will support consistency in assessment and provide an invaluable source of data to help the government monitor improvements over time.

Extract from SB SEPP Chapter 1:

**The Sustainable Buildings SEPP aims to:**

- (a) encourage the design and delivery of sustainable buildings,
- (b) ensure consistent assessment of the sustainability of buildings,
- (c) record accurate data about the sustainability of buildings, to enable improvements to be monitored,
- (d) monitor the embodied emissions of materials used in the construction of buildings,
- (e) minimise the consumption of energy,
- (f) reduce greenhouse gas emissions,
- (g) minimise the consumption of mains-supplied potable water,
- (h) ensure good thermal performance of buildings.

# Policy Provisions

The Sustainable Buildings SEPP introduces new performance provisions for non-residential development in NSW.

## Chapter 3 applies to:

- All non residential development except in excluded land use zones (rural, heavy industry, waterways etc)
- Energy and water standards and net zero provisions for large commercial development:
  - Hotels and motels > 100 rooms
  - Serviced apartments > 100 apartments
  - Commercial offices > 1,000 sqm NLA
- Net zero statement for state significant development:
  - Educational facilities
  - Cultural facilities
  - Health buildings



	Non –Residential measures	Policy provisions:	Applies to:
1	<b>General provisions</b>	Consider waste minimisation, water reduction, energy storage + generation.	All non-residential development
2	<b>Embodied emissions reporting</b>	Disclose quantities of key materials and associated embodied emissions	All non-residential development
3	<b>Net Zero statement</b>	Show that development does not use fossil fuels or can transition by 2035	Large commercial + certain SSD
4	<b>Water performance</b>	Achieve water standards and verify these 24 months post occupancy.	Large commercial
5a	<b>Energy performance +</b>	Achieve energy standards and verify these 24 months post occupancy	Large commercial
5b	<b>Offsets purchase</b>	Offset on site fossil fuel use and energy performance gap	Large commercial



# Policy Provisions - clarifications

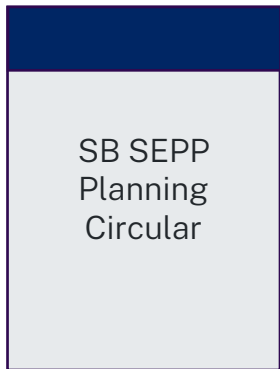
Minor policy updates are in progress to resolve any ambiguity.

Changes will be 'made' before 1 October 2023 and reflected in the legislation.

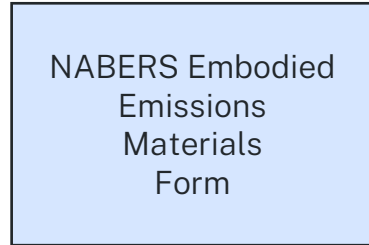
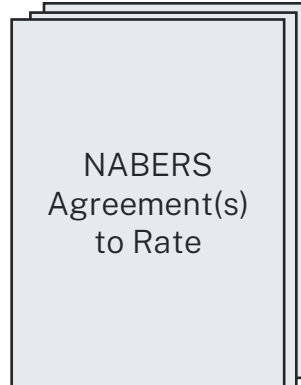
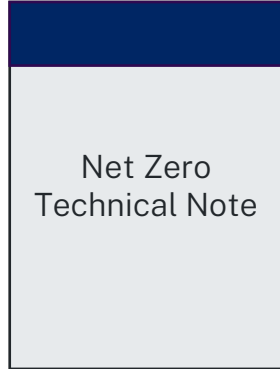
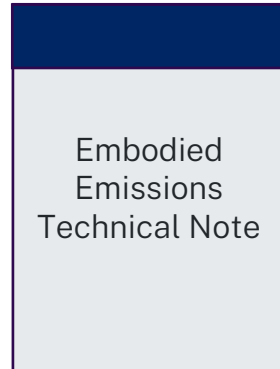
Issue	Example of legislation update
Application of chapter 3	Review CIV lower limit so that the chapter does not apply to smaller non-residential developments less than \$5M CIV.
Verification of quantities	Enable a NABERS assessor to verify material and emissions quantities, as well as designers, engineers, quantity surveyors.
Crown land	Clarify how the embodied emissions reporting requirements apply to development on Crown Land in relation to crown building works certificates and post-occupation.
24 months after occupation certificate	Enable requests for 1 year extension on achieving energy and water standards where reasonable – for example staged development or change of owner.

# Technical guidance

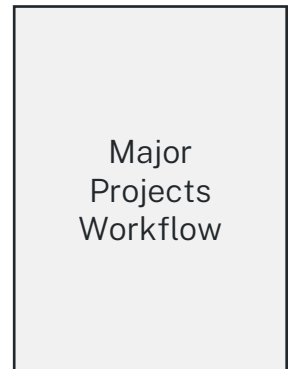
## Overview documents



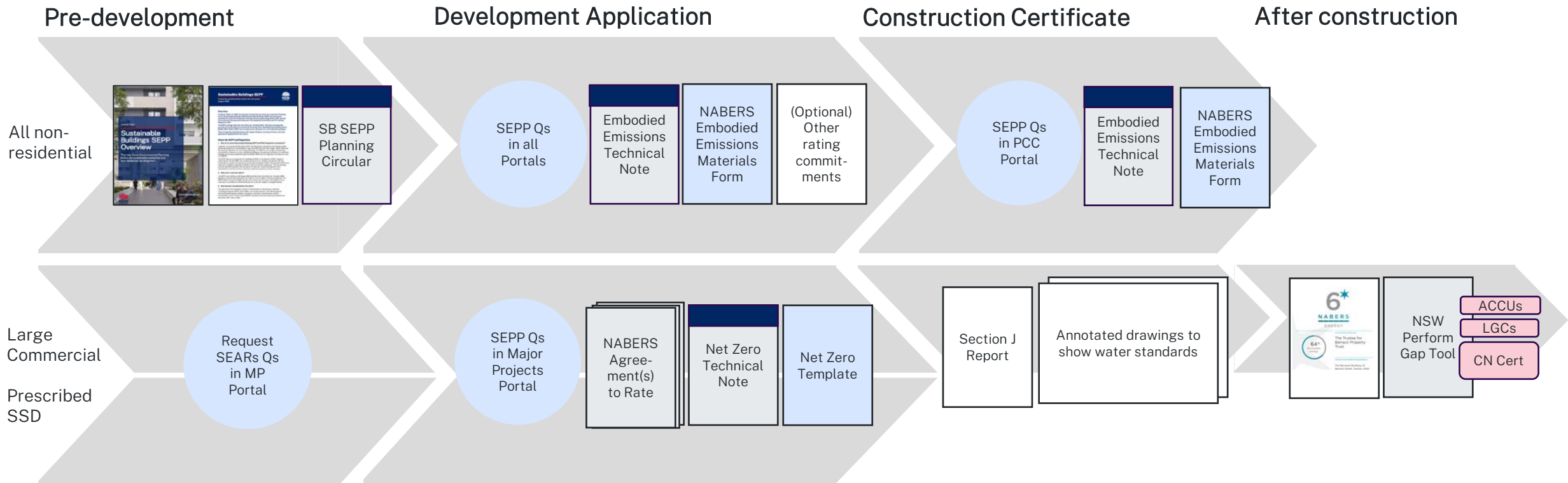
## Tools and technical notes



## Digital reference documents



# Project life cycle

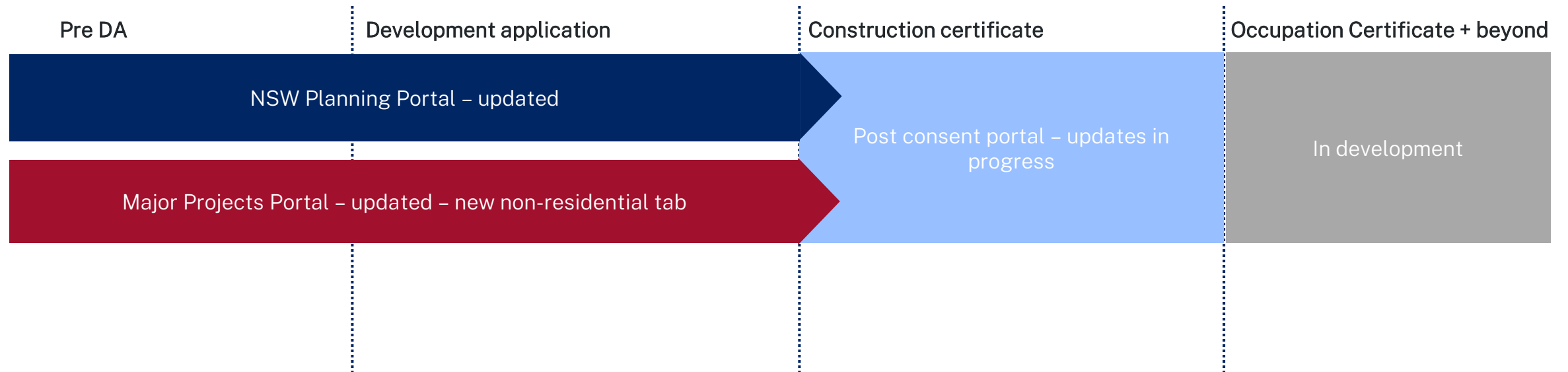




# Digital implementation

We have been working on digital integration into the NSW Planning Portal.

New questions for non-residential development will streamline the application process and improve the user experience over a project life cycle.



### Sustainable Buildings

Is the development exempt from the **State Environmental Planning Policy (Sustainable Buildings) 2022, Chapter 3**, relating to non-residential buildings? \* What is this?

Yes

No

Refer to the State Environmental Planning Policy (Sustainable Buildings) 2022, Chapter 3.1, for details of non-residential developments to which the SEPP applies or does not apply.

[If yes] Provide reason for exemption, select all that apply:

- Development that is permitted with or without consent or is exempt or complying development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
- Development that is permitted with or without consent or is exempt or complying development under State Environmental Planning Policy (Resources and Energy) 2021, Chapter 2
- Development that is permitted with or without consent or is exempt or complying development under State Environmental Planning Policy (Transport and Infrastructure) 2021, Chapter 5
- Development on land wholly in RU1, RU2, RU3, E5, IN3, C1, C2, C3, W1, W2, W3 or W4
- Development for purposes of residential care facilities
- Development that is wholly residential
- An alteration or addition with a Capital Investment Value under \$10 million
- A modification to a development application, where the original application was lodged before 1 October 2023

# 1. General Sustainability



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**Policy provisions for all non-residential development**  
September 2023

**Jillian Hopkins**  
Principal Design Advisor  
GANSW







# General Sustainability summary

Measure	General sustainability
Policy requirement	<p>The development must consider</p> <ul style="list-style-type: none"> <li>• minimisation of waste from demolition and construction</li> <li>• reduction in peak demand for electricity, incl efficient technology,</li> <li>• reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design,</li> <li>• generation and storage of renewable energy,</li> <li>• metering and monitoring of energy consumption,</li> <li>• minimisation of the consumption of potable water.</li> </ul>
Application	All non-residential development - DA
SEPP reference:	Clause 3.2 (1) General sustainability
What's new?	Questions, data and free text fields added to the NSW Planning portal development application processes to capture the policy response.



# General Sustainability policy

## Policy – extract

### State Environmental Planning Policy (Sustainable Buildings 2022)

#### 3.2 Development consent for non-residential development

*(1) In deciding whether to grant development consent to non-residential development, the consent authority must consider whether the development is designed to enable the following –*

- (a) the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials,*
- (b) a reduction in peak demand for electricity, including through the use of energy efficient technology,*
- (c) a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design,*
- (d) the generation and storage of renewable energy,*
- (e) the metering and monitoring of energy consumption,*
- (f) the minimisation of the consumption of potable water.*



### General Sustainability

Has the proposed development been designed to enable any of the following sustainability measures? \* **Select all that apply**

- The minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials
- A reduction in peak demand for electricity, including through the use of energy-efficient technology
- A reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design
- The generation and storage of renewable energy
- The metering and monitoring of energy consumption
- The minimisation of the consumption of potable water
- Other

**Provide further detail on the general sustainability provisions and list any relevant documents that accompany this application.**

Is the development seeking certification from a sustainability rating system?  Yes

No



**[If yes] Which sustainability rating/s will the development achieve?**

- NABERS certification
- Green Star Buildings certification
- Green Star Communities certification
- LEED Certification
- Passive House certification
- Living Building Challenge certification
- Other

**What star rating or sustainability level will be achieved by the development?**



# General Sustainability process

## Applicant steps

- Review policy provision for general sustainability provisions
- **DA** - Tick boxes and add free field text in the NSW Planning Portal, cross reference any drawings or reports that illustrate general sustainability provisions
- **DA** - Fill in optional information about other rating tools in the NSW Planning Portal at DA Stage

# General Sustainability process

## Applicant steps

- Review policy provision for general sustainability provisions
- **DA** - Tick boxes and add free field text in the NSW Planning Portal, cross reference any drawings or reports that illustrate general sustainability provisions
- **DA** - Fill in optional information about other rating tools in the NSW Planning Portal at DA Stage

## Assessor steps

- Confirm that the Sustainable Buildings SEPP applies to the development by checking chapter 3.1 of the policy
- **DA** - Review answers on the NSW Planning Portal to consider if applicant has addressed this provisions and take into account during determination.

# 2. Embodied Emissions Reporting



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**Policy provisions for all non-residential development**  
September 2023

**Jillian Hopkins**  
Principal Design Advisor  
GANSW





# Embodied Emissions Summary



Measure	Embodied Emissions Disclosure
Policy requirement	<ul style="list-style-type: none"> <li>Describe the use of low-emission construction technologies in the development (e.g. reuse of materials, recycled content)</li> <li>Disclose (at DA and update at CC) quantities of key materials used and associated embodied emissions</li> <li>Material quantities to be certified by quantity surveyor / builder / designer / <a href="#">and NABERS assessor</a></li> </ul>
Application	All non-residential development
SEPP reference:	Clause 3.2 (2) Embodied emissions quantified
Regulation reference:	Schedule 2 (35B) Emissions reporting at DA Schedule 1 (10A) Emissions reporting at CC
What's new?	<p>NABERS Embodied Emissions Materials Form defined as pathway. NABERS Agreement(s) to Rate incorporate embodied emissions – optional Embodied emissions technical note in final stages.</p> <p>Regulation update to enable NABERS assessor to verify quantities Regulation update to clarify that this provision also applies to Crown Land</p> <p>Low emissions technologies defined in the Planning Portal to include modular construction, pre fabrication, parametric design, electric construction vehicles.</p>

Embodied Emissions Technical Note

# Embodied Emissions Policy



## Policy – extract

### State Environmental Planning Policy (Sustainable Buildings 2022)

#### 3.2 Development consent for non-residential development

*(2) Development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified*

## DA - extract

### Amendment of Environmental Planning and Assessment Regulation 2021

35B embodied emissions for non-residential development under Sustainable Buildings SEPP

*(1) A development application for non-residential development under State Environmental Planning Policy (Sustainable Buildings) 2022 must -*

- (a) Disclose the amount of embodied emissions attributable to the development,*
- (b) Describe the use of low emissions construction technologies in the development .*

*(2) The amount disclosed under subsection (1) (a) must be determined using—*

- (a) The form published on the NSW planning portal as in force from time to time, and*
- (b) An itemised list of building materials for the development prepared by a quantity surveyor. Example – a bill of materials or bill of quantities.*

*(3) The amount disclosed under subsection (1) (a) must be certified by –*

- (a) a quantity surveyor, or*
- (b) A qualified designer, or*
- (c) An engineer, or*
- (d) NABERS assessor*

## CC – extract

### Amendment of Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

10A embodied emissions for non-residential development under Sustainable Buildings SEPP

*(2) A development application for non-residential development under State Environmental Planning Policy (Sustainable Buildings) 2022 must -*

- (a) Disclose the amount of embodied emissions attributable to the development,*
- (b) Describe the use of low emissions construction technologies in the development .*

*(3) The amount disclosed under subsection (2) must be determined using—*

- (a) The form published on the NSW planning portal as in force from time to time, and*
- (b) An itemised list of building materials for the development prepared by a quantity surveyor. Example – a bill of materials or bill of quantities.*

*(4) The amount disclosed under subsection (2) must be certified by –*

- (a) a quantity surveyor, or*
- (b) A qualified designer, or*
- (c) An engineer, or*
- (d) NABERS assessor*

# Embodied Emissions Technical Note

Department of Planning and Environment  
Embodied Emissions Technical Note



## Embodied Emissions Reporting

This note sets out the proposed methodology for assessing the embodied emissions of residential and non-residential development in NSW to satisfy the Sustainable Buildings SEPP requirements.

The NSW government's *State Environmental Planning Policy (Sustainable Buildings SEPP) 2022 (SB SEPP)* is a policy framework aimed at promoting sustainable building practices and reducing the environmental impact of the built environment in the state. To help achieve this, the SB SEPP introduces embodied emissions measurement and reporting for all building types and their associated materials.

Research commissioned by the federal government and undertaken by the Green Building Council of Australia (GBCA) in 2021 found embodied emissions made up 16% of Australia's built environment footprint in 2019. Without deliberate action, this could increase to 85% by 2050 as buildings become more efficient and the power grid decarbonises through increased renewables<sup>1</sup>. To achieve Australia's net zero emissions target by 2050, we must begin measuring and managing embodied emissions in buildings.

### Scope of emissions reporting

#### When is reporting required?

From 1 October 2023, all new residential and non-residential developments must report on embodied emissions under the SB SEPP.

Applicants are required to disclose the quantities of key materials and associated embodied emissions at the development application and construction certificate stages, and also when applying for a complying development certificate for residential development.

#### How are emissions reported?

Two reporting methodologies have been tailored to residential and non-residential development types.

The BASIX Materials Index is integrated with the BASIX online tool to streamline measurement for residential developments.

The NABERS Embodied Emissions Tool will be the required format for non-residential reporting when the NABERS framework is released in mid-2024. In the interim, a NABERS Embodied Emissions Materials Form must be completed.

Further details on these tools can be found later in this document.

#### What must be reported?

The SB SEPP targets upfront embodied emissions, often referred to as cradle-to-gate emissions or stages A1-A3 of a building's life cycle. These are emissions associated with the manufacturing of a product and will be responsible for around half of the entire carbon footprint of new construction between now and 2050<sup>2</sup>.

While the SB SEPP does not require reporting on the full life cycle impacts of building

The Embodied Emissions Reporting Technical Note outlines how materials and their embodied emissions will be measured and disclosed for both residential and non-residential development type.

The 4-Page Technical Note will be available in September 2023 and is structured under the following headings:

- When is reporting required?
- How are emissions reported?
- What must be reported?
- Residential reporting requirements
- Non residential reporting requirements
  - NABERS Embodied Emissions Materials Form (from 1 October 2023)
  - NABERS Embodied Emissions Framework and Tool (from mid 2024)
- Considering materials
- Further information

<sup>1</sup> Green Building Council of Australia, *Embodied Carbon & Embodied Energy in Australia's Buildings, 2021* <https://www.gbc.org.au/embodied-carbon-and-embodied-energy-embodied-carbon-report>  
<sup>2</sup> World Green Building Council, *Bringing embodied carbon upfront, 2019* <https://www.wgbc.org.au/sites/default/files/2019/08/01/2019-08-01-Bringing-Embodied-Carbon-Upfront.pdf>



# Embodied Emissions and the NABERS Framework

NABERS Embodied Emission  
Materials Form

[INTERIM]  
October 2023

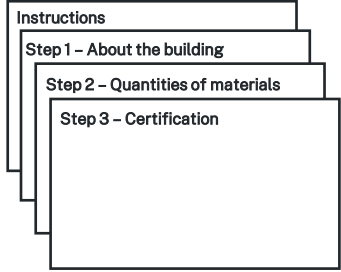
Material quantities only - no emissions  
factors, pending finalisation of  
NABERS embodied emissions framework


NABERS Embodied Emissions  
Framework and Tool

[Final]  
July 2024

Materials and embodied emissions,  
using the NABERS embodied emissions framework  
- national consistency

# NABERS embodied emissions materials form



 **NABERS**

NSW Government  
4 Parramatta Square  
Parramatta NSW 2150  
nabers.gov.au

## NABERS Embodied emissions materials form

**New non-residential developments must complete this form**

From 1 October 2023, all new non-residential developments must report on embodied emissions using this form in NSW, where the NSW government's State Environmental Planning Policy (Sustainable Buildings SEPP) 2022 applies. You must disclose the amounts of key materials at the development application and construction certificate stages.

Embodied carbon emissions are generated across the full life cycle of a building from "cradle to grave". Embodied carbon made up 16% of the whole-of-life carbon footprint of Australia's buildings in 2019 [1]. The purpose of this form is to report on material quantities only, to support project team discussions about potential reduction in emissions from key materials. The form does not include embodied emissions factors. This reporting form will be updated to reflect the NABERS Embodied Carbon tool when it's available in 2024.

### Step 1: About the building

In the 'About the building' tab, you will add the location, function, and type of building you are planning to construct. You will also need to add information that describes the building, including gross floor area, number of floors, area of carpark, and more. Collecting this information will allow the NSW Government to compare similar buildings.

### Step 2: Quantity of materials

In the 'Quantity of materials' tab, you will add the amounts of materials that you will use to construct your building. You only need to complete those fields relevant to your building. Leave fields that aren't relevant to your building blank. We recognise that there will be uncertainty, particularly at DA stage, so please use your best estimates where information is unknown (e.g., based on past projects).

Instructions | Step 1 - About the building | Step 2 - Quantity of materials | Step 3 - Certifier details | +

**Instructions:** Explains purpose of form; that minimum of 80% of cold shell emissions required; and that this form is an interim arrangement to be superseded by NABERS framework when available in 2024

# NABERS embodied emissions materials form

Instructions

Step 1 – About the building

Step 2 – Quantities of materials

Step 3 – Certification

**Step 1: About the building**

Fill out blue cells

Building location and site data	Value	Unit	Note	Comment
Building address			Required	Postcode of building
Postcode	Post code not found		Required	Town/city/suburb/region of the building site
Town/city			Required	Distance to nearest major city/town
Distance to nearest major city/town		km	Required	Enter for rural/regional locations only
Project stage	Please select		Required	Declare the shortest route by road to your site from the centre of your nearest major city (>100,000 people). The route must be traversable by a semi-trailer truck
New build or major renovation?	Please select		Required	Stage of development

Floor area by NCC building classification	Gross (GFA)	Net (IN/ANS/IFA)	Unit	Note
Please enter all floor areas relevant to your building. Leave areas blank if not applicable. Please enter Gross Floor Area (GFA) for all building classifications. Please also enter the corresponding net area (Net Lettable Area, Net Sellable Area or Usable Floor Area) where it is necessary used for that building classification.				
Class 1a Detached residential buildings			m <sup>2</sup>	Required for Class 1a: Detached residential houses, townhouses
Class 1b Boarding houses and hostels			m <sup>2</sup>	Required for Class 1b: Boarding house, guest house, hostel
Class 2 Multi-unit residential buildings			m <sup>2</sup>	Required for Class 2: Multi-unit residential, including apartment buildings
Class 3 Other residential buildings			m <sup>2</sup>	Required for Class 3: Other residential buildings
Class 4 Residential inside non-residential			m <sup>2</sup>	Required for Class 4: Residential building inside a non-residential building, e.g. caraboyer residence
Class 5 Office buildings			m <sup>2</sup>	Required for Class 5: Office building
Class 6 Retail buildings			m <sup>2</sup>	Required for Class 6: Retail building, e.g. shop, restaurant, cafe
Class 7a Carparks			m <sup>2</sup>	Required for Class 7a: Carparks
Class 7b Warehouse-type buildings			m <sup>2</sup>	Required for Class 7b: Warehouse, abattoirs and storage facilities
Class 8 Industrial buildings			m <sup>2</sup>	Required for Class 8: Industrial buildings, e.g. factories and workshops
Class 9a Healthcare buildings			m <sup>2</sup>	Required for Class 9a: Healthcare, e.g. hospitals, clinics, day centres
Class 9b Civic buildings			m <sup>2</sup>	Required for Class 9b: Civic buildings, e.g. theatres, civic centres, train stations
Class 9c Aged care and personal care buildings			m <sup>2</sup>	Required for Class 9c: Aged care and personal care
Class 10a Non-habitable buildings			m <sup>2</sup>	Required for Class 10a: Non-habitable buildings including sheds, carports and private garages
Class 10b Miscellaneous structures			m <sup>2</sup>	Required for Class 10b: Miscellaneous structures, including fences, masts, antennas, retaining walls and swimming pools
Class 10c Quireline shelters			m <sup>2</sup>	Required for Class 10c: Quireline shelters not attached to a Class 1a building
Total	0	0	m <sup>2</sup>	Required: Sum of m <sup>2</sup> inputs must be more than 0

Project information	Value	Unit	Note
Total cost of project	AUD excl. GST	Required	Include labour, materials, transport, plant, equipment and professional fees. Exclude GST, land, finance, excavation and other costs.
Building design life	years	Required	If uncertain, enter 50 years
Estimated average life	years	Optional	
Estimated replacement cycle for mechanical services	years	Optional	
Estimated replacement cycle for vertical transportation	years	Optional	

Dimension of the building and the site	Value	Unit	Note
Site area		m <sup>2</sup>	Required: Total area of site to external boundary. For shared sites, enter the area for the external building, plus the building's share of all common areas included by GFA. For example, if a site was 10,000 m <sup>2</sup> , the proposed building was 2,000 m <sup>2</sup> , another building on the site was 3,000 m <sup>2</sup> and there was 5,000 m <sup>2</sup> of common area, enter 4,000 m <sup>2</sup> = 2,000 + (5,000 * 2,000 / 10,000)
Site occupancy	Please select		Required: Site occupancy means that the main building is the only building on the site. Shared occupancy means multiple buildings on one site.
Building footprint area		m <sup>2</sup>	Required: Total floor area of the ground floor measured to the outside edge of the floorplate.
Typical floor area (if different to building footprint area)		m <sup>2</sup>	Only needed if different to row above
Typical floor perimeter		m	Required
Area of external carpark (not included in GFA)		m <sup>2</sup>	Required: Enter 0 if not applicable
Area of external hardstand (not included in GFA)		m <sup>2</sup>	Required: Enter 0 if not applicable
Area of other hard landscaping (not included in GFA)		m <sup>2</sup>	Required: Enter 0 if not applicable. Include all other impervious areas. For example, patios, paths and driveways (not already included in carpark and hardstands above).
Number of floors/storeys above grade, including ground floor		no	Required
Number of floors/storeys below grade		no	Required: Enter 0 if not applicable
Number of floors/storeys of car parking		no	Required: Enter 0 if not applicable
Total height above grade		m	Required: Measured from the average finished grade to the highest part of the building, excluding protrusions (lighting rods, masts, chimneys, etc.)

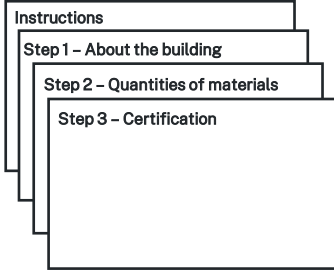
Structural material choices	Value	Unit	Note
Foundation type	Please select		Required
Frame type (non-susp)	Please select		Required
Suspended floor type (typical)	Please select		Only needed for multi-storey buildings

**Instructions:** Explains purpose of form; that minimum of 80% of cold shell emissions required; and that this form is an interim arrangement to be superseded by NABERS framework when available in 2024

**Step 1: About the Building:** Project address, sizes and metrics, location, key materials – noting that this could be a cover sheet



# NABERS embodied emissions materials form



**NABERS**

**Step 2: Quantity of materials**  
Complete all blue cells that are applicable to the building. Leave items that aren't applicable blank. Fill out blue cells

Material category	Sub-category 1	Sub-category 2	Sub-category 3	Value	Unit of measure	Comment	AUS ACMM Code	ICMS3 (Level 3) Code Construction
<b>Structure</b>								
The structural parts of the building that are below ground (substructure) and above ground (superstructure). This includes fill below the substructure, foundations, basement levels, suspended floors, wall structure, roof structure, stairs, lift shafts and balconies. It excludes external areas such as hardstands, carparks, patios, etc.								
Coverage of structural material spend								
Concrete in-situ	<10 MPa				%	Required. Coverage of spend for structural elements entered below. Minimum requirement = 20%. Exclude head contractor preliminaries and margins.		
Concrete in-situ	>10 MPa to <20 MPa				m <sup>3</sup>	Please enter reinforcing steel as part of 'Reinforcing steel' below.	01_5B or 02-11	02 or 03
Concrete in-situ	>20 MPa to <40 MPa				m <sup>3</sup>	Please enter reinforcing steel as part of 'Reinforcing steel' below.	01_5B or 02-11	02 or 03
Concrete in-situ	>40 MPa to <60 MPa				m <sup>3</sup>	Please enter reinforcing steel as part of 'Reinforcing steel' below.	01_5B or 02-11	02 or 03
Concrete in-situ	>60 MPa to <80 MPa				m <sup>3</sup>	Please enter reinforcing steel as part of 'Reinforcing steel' below.	01_5B or 02-11	02 or 03
Concrete in-situ	>80 MPa to <100 MPa				m <sup>3</sup>	Please enter reinforcing steel as part of 'Reinforcing steel' below.	01_5B or 02-11	02 or 03
Concrete in-situ	>100 MPa				m <sup>3</sup>	Please enter reinforcing steel as part of 'Reinforcing steel' below.	01_5B or 02-11	02 or 03
Concrete pre-cast panel					m <sup>2</sup>	Please enter reinforcing steel in relevant line items below. If not known at O4 stage, please make your best estimate. If not known at CC stage, please ask your supplier.	01_5B or 02-11	02 or 03
Concrete block	Hollow core				m <sup>3</sup>	Enter as cubic metres, calculated as (area in m <sup>2</sup> ) * (thickness in mm / 1000).	01_5B	02 or 03
Concrete block/brick	Solid				m <sup>3</sup>	Please include all block in concrete and all reinforcing steel in relevant line items above/below.	01_5B	02 or 03
Concrete block/brick	Solid AAC				m <sup>3</sup>	Enter as cubic metres, calculated as (area in m <sup>2</sup> ) * (thickness in mm / 1000).	01_5B	02 or 03
Mortar					kg	Solid Autoclaved Concrete (AAC) block. Enter as cubic metres, calculated as (area in m <sup>2</sup> ) * (thickness in mm / 1000).	01_5B	02 or 03
Reinforcing steel	Bar & mesh				kg	Include all reinforcing steel bar/mesh in the building's structure in this row. Usually the weight is calculated as kg/m <sup>3</sup> per concrete element and then summed. Example: 10 m <sup>2</sup> of 40 MPa concrete @ 120 kg/m <sup>3</sup> = 1.2 m <sup>3</sup> of 40 MPa concrete @ 120 kg/m <sup>3</sup> = 144 kg reinforcing steel. Include all steel fibre reinforcing and steel strand in the building's structure in this row.	01_5B or 02-11	02 or 03
Reinforcing steel	Fibre & strand				kg	Examples include universal beams, universal columns and welded beams.	01_5B or 02-11	02 or 03
Structural steel	Hot rolled structural				t	Examples include C purlins, Z purlins and all light gauge steel framing.	01_5B	02 or 03
Structural steel	Cold formed structural				t	Examples include C purlins, Z purlins and all light gauge steel framing.	01_5B	02 or 03
Structural steel	Other welded structural				t	Examples include C purlins, Z purlins and all light gauge steel framing.	01_5B	02 or 03
Structural steel	Plate				t	Include any allowance for connections here.	01_5B	02 or 03
Structural steel	Sheet				t		01_5B	02 or 03
<b>Envelope</b>								
The skin of the building that separates the internal building from the external environment. This includes the roof cladding, wall cladding, windows, doors and internal/external shading. It also includes insulation and the internal wall lining of envelope walls.								
Coverage of envelope material spend								
Roof cladding	Profiled steel				m <sup>2</sup>	Required. Coverage of spend for the envelope items you have entered below. Minimum requirement = 20%. Exclude head contractor preliminaries and margins. Enter as m <sup>2</sup> of roof area. Exclude allowances for overlap in the roofing sheets. This row includes all metal-coated and pre-painted steel sheets where steel is the base metal. Examples include galvanneal steel, zinc-aluminum (zincalume) coated steel and zinc-aluminum-magnesium (ZAM) coated steel, whether painted or unpainted.	05_RF	03 or 04
Roof cladding	Profiled aluminum				m <sup>2</sup>	Enter as m <sup>2</sup> of roof area. Exclude allowances for overlap in the roofing sheets. This row also includes pre-painted aluminum sheets.	05_RF	03 or 04
Roof cladding	Profiled zinc				m <sup>2</sup>	Enter as m <sup>2</sup> of roof area. Exclude allowances for overlap in the roofing sheets. This row also includes pre-painted zinc sheets.	05_RF	03 or 04
Roof cladding	Membrane				m <sup>2</sup>	Enter as m <sup>2</sup> of roof area. Exclude allowances for overlap in the membrane sheets.	05_RF	03 or 04
Roof cladding	Tiles (traditional clay)				m <sup>2</sup>	Enter as m <sup>2</sup> of roof area. Exclude allowances for overlap between the tiles.	05_RF	03 or 04
Roof cladding	Tiles (concrete)				m <sup>2</sup>	Enter as m <sup>2</sup> of roof area. Exclude allowances for overlap between the tiles.	05_RF	03 or 04
Roof cladding	Other (Please describe **)				m <sup>2</sup>	Please enter a description for any roofing that does not fit a predefined classification.	05_RF	03 or 04
Wall cladding	Bricks (traditional clay)				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area.	06_EW	03 or 04
Wall cladding	Bricks (concrete)				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area.	06_EW	03 or 04
Wall cladding	Mortar and render				kg	Enter as m <sup>2</sup> of wall area.	06_EW	03 or 04
Wall cladding	Profiled steel				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. Exclude allowances for overlap in the cladding sheets, offcuts, etc. This row includes all metal-coated and pre-painted steel sheets where steel is the base metal. Examples include galvanneal steel, zinc-aluminum (zincalume) coated steel and zinc-aluminum-magnesium (ZAM) coated steel, whether painted or unpainted.	06_EW	03 or 04
Wall cladding	Profiled aluminum				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. Exclude allowances for overlap in the cladding sheets, offcuts, etc. This row also includes pre-painted aluminum sheets.	06_EW	03 or 04
Wall cladding	Profiled zinc				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. Exclude allowances for overlap in the cladding sheets, offcuts, etc. This row also includes pre-painted zinc sheets.	06_EW	03 or 04
Wall cladding	GRC cladding				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. GRC = Glass Reinforced Concrete.	06_EW	03 or 04
Wall cladding	Timber weatherboards				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. Exclude allowances for overlap between weatherboards, offcuts, etc.	06_EW	03 or 04
Wall cladding	Fibre cement board				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04
Wall cladding	Terracotta				m <sup>2</sup>	Enter as m <sup>2</sup> of wall area. Exclude allowances for offcuts, etc.	06_EW	03 or 04

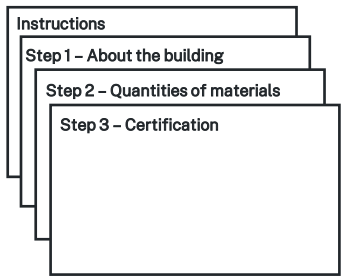
**Instructions:** Explains purpose of form; that minimum of 80% of cold shell emissions required; and that this form is an interim arrangement to be superseded by NABERS framework when available in 2024

**Step 1: About the Building:** Project address, sizes and metrics, location, key materials - noting that this could be a cover sheet

**Step 2: Material Quantities:** Itemised list of materials, separated into building components and specific materials; prompt to comment on sub materials; designed so that emissions factors could be added later

- Substructure
- Superstructure
- Internal walls (structural)
- Façade
- External works
- Services - \$\$

# NABERS embodied emissions materials form



## Step 3: Certifier details

Fill out blue cells

The material quantities must be determined through an itemised list of building materials (such as a bill of quantities) and certified by a quantity surveyor, designer, engineer or NABERS Assessor.

Person that completed this form	Value	Note
Name		Required
Company		Required
ABN		
Profession		Required
Qualification or registration		Required
Person that certified the details in this form	Value	Note
Name		Required
Company		Required
ABN		
Profession		Required
Qualification or registration		Required
Confirmation of certification	Value	Note
Are 80% of material costs captured for the building's structure, envelope and external works?	Please select	Required
If no - why not?		
<b>Additional comments from data provider</b>		
<b>Additional comments of certifier</b>		

**Instructions:** Explains purpose of form; that minimum of 80% of cold shell emissions required; and that this form is an interim arrangement to be superseded by NABERS framework when available in 2024

**Step 1: About the Building:** Project address, sizes and metrics, location, key materials – noting that this could be a cover sheet

**Step 2: Material Quantities:** Itemised list of materials, separated into building components and specific materials; prompt to comment on sub materials; designed so that emissions factors could be added later

- Substructure
- Superstructure
- Internal walls (structural)
- Façade
- External works
- Services - \$\$

**Step 3: Certification:** Identify who has filled in the form and the details of the professional who has verified it

### Embodied emissions for non-residential development

Does the NABERS Embodied Emissions Materials Form accompany this application? \* [What is this?](#)

- Yes  
 No

This application must be accompanied by a NABERS Embodied Emissions Materials Form certified by an engineer, qualified designer, quantity surveyor or NABERS assessor and include a bill of quantities. Refer to the [Embodied Emissions Technical Note](#) for guidance.

**[If yes]** Provide details of the qualified person certifying the embodied emission amounts disclosed in the form \*

First name	Surname	Qualification	Registration
Business name	ABN	Designer Engineer NABERS assessor Quantity surveyor	

Has a voluntary NABERS Agreement to Rate relating to embodied emissions been prepared for each large commercial development type?\*

- Yes  
 No

**[If yes]** Provide agreement reference number \*

### Low emissions construction technologies

Describe any low emissions construction technologies used in the development \* [What is this?](#)

Examples include modular construction systems, parametric design to optimise structures, robotic fabrication to reduce product waste, carbon neutral manufacturing practices or materials that include recycled content, locally sourced materials and other innovations.

Is the development designed to retain or reuse an existing building? \*

- Yes  
 No

**[If yes]** What percentage of the total development has been re-used? \*  %

Is the development designed to use recycled materials (optional)?

- Yes  
 No

Has a whole of Life Cycle Analysis (LCA) been prepared (optional)?

- Yes  
 No



## Embodied emissions for non-residential development

Does the NABERS Embodied Emissions Tool accompany this application?

Yes

No

**[If yes]** Provide details of the qualified person certifying the embodied emission amounts disclosed in the form \*

First name	Surname	Qualification	Registration
Business name	ABN	Designer Engineer NABERS assessor Quantity surveyor	

Note: that the reporting form will be updated in the NSW Planning Portal when the NABERS Embodied Emissions Framework is released.

# Embodied emissions reporting process

## Applicant steps

- Review policy provision and technical note relating to embodied emissions reporting and low emissions construction technology.
- **DA-** Download the NABERS Embodied Emissions Materials Form from the NABERS website, complete all tabs for at least 80% materials
- **DA-** Consider whether to enter a voluntary NABERS Agreement to Rate relating to embodied emissions
- **DA-** Enter data about emissions reporting and low emissions technology into the NSW Planning Portal and upload form
- **CC or crown building works** – Update embodied emissions form an upload to NSW Planning Portal and answer questions.

# Embodied emissions reporting process

## Applicant steps

- Review policy provision and technical note relating to embodied emissions reporting and low emissions construction technology.
- **DA**- Download the NABERS Embodied Emissions Materials Form from the NABERS website, complete all tabs for at least 80% materials
- **DA**- Consider whether to enter a voluntary NABERS Agreement to Rate relating to embodied emissions
- **DA**- Enter data about emissions reporting and low emissions technology into the NSW Planning Portal and upload form
- **CC or crown building works** – Update embodied emissions form an upload to NSW Planning Portal and answer questions.

## Assessor steps

- Confirm that the Sustainable Buildings SEPP applies to the development by checking chapter 3.1 of the policy
- **DA** – Review answers to the low emission construction technology questions in the NSW Planning Portal.
- **DA** - Check that emissions report and Bill of Quantities or Quantity Surveyor's report has been uploaded to the NSW Planning Portal and verified as required.
- **CC or crown building works** - Review resubmitted form at construction certificate phase.

# 3. Net Zero Statement



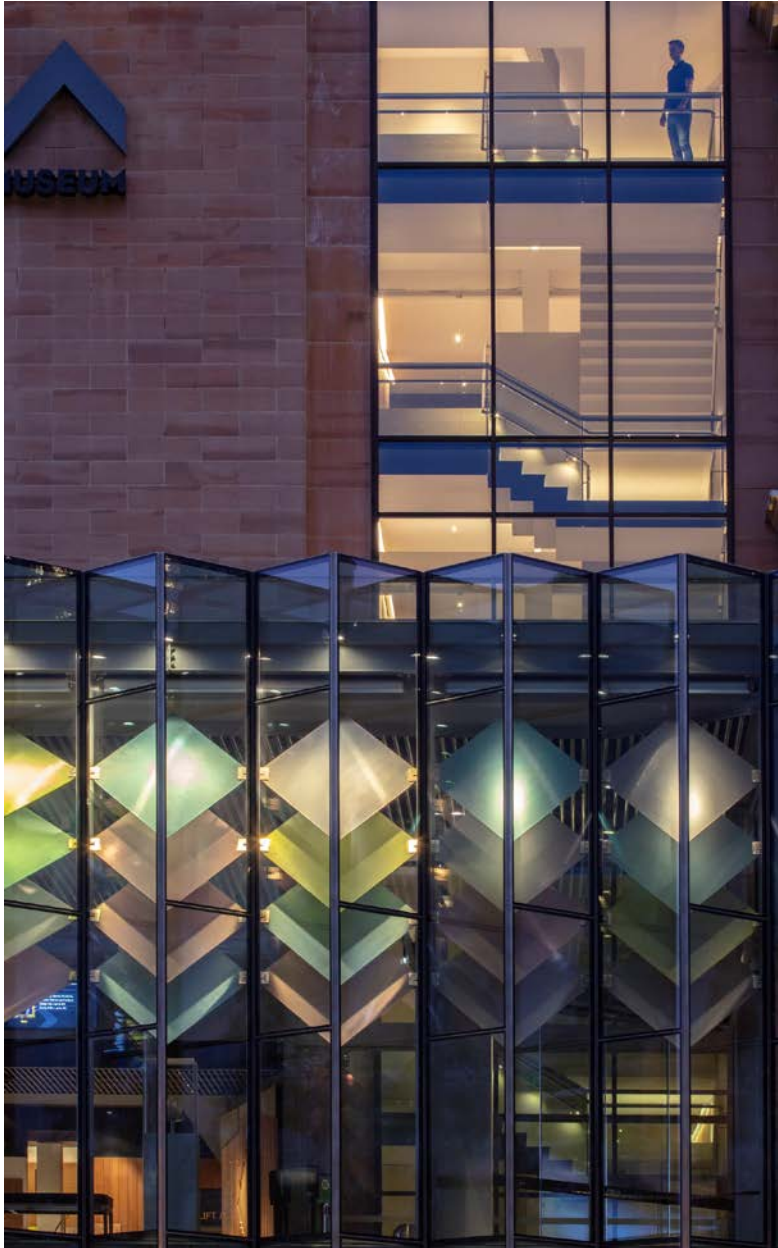
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**Policy provisions for certain SSD and large commercial development**  
September 2023

**Jillian Hopkins**  
Principal Design Advisor  
GANSW



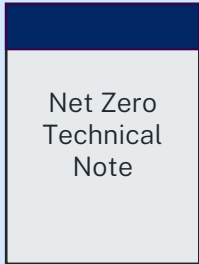




# Net Zero Statement



Measure	Net Zero Statement
Policy requirement	<p>Demonstrate that the development will:</p> <ul style="list-style-type: none"> <li>• not use fossil fuels onsite, or</li> <li>• incorporates the infrastructure, or space for the infrastructure, necessary for the development to not use fossil fuels onsite after 1 January 2035</li> </ul> <p>The statement must be certified by a mechanical or electrical engineer</p>
Application	<b>Prescribed Large Commercial and Prescribed State Significant Development (health, education, cultural)</b>
SEPP reference:	Clause 3.3 for Large Commercial and Clause 3.4 for State Significant Development
Regulation reference:	Schedule 2 (35C) Net Zero statement at DA
What's new?	<p>Net Zero technical note and template in final stages; to be released in August 2023.</p> <p>Net Zero trigger questions integrated into the NSW Planning Portal.</p> <p>Correlation with City of Sydney Net Zero Planning Proposal</p>



# Net Zero Statement



## Policy provision - extract

### State Environmental Planning Policy (Sustainable Buildings 2022)

#### 3.3 Other considerations for large commercial development

(1) In deciding whether to grant development consent to large commercial development, the consent authority must consider whether the development minimises the use of on-site fossil fuels, as part of the goal of achieving net zero emissions in New South Wales by 2050.

#### 3.4 Other considerations for certain State significant development

(1) This section applies to non-residential development that is State significant development specified in State Environmental Planning Policy (Planning Systems) 2021, Schedule 1, sections 13–15.

(2) In deciding whether to grant development consent to development to which this section applies, the consent authority must consider whether the development will minimise the use of on-site fossil fuels, as part of the goal of achieving net zero emissions in New South Wales by 2050.

## DA - extract

### Amendment of Environmental Planning and Assessment Regulation 2021

*35C Net zero statement for non-residential development under Sustainable Buildings SEPP*

*(1) This section applies to a development application for the following development under State Environmental Planning Policy (Sustainable Buildings) 2022—*

*(a) large commercial development,*

*(b) non-residential development that is State significant development specified in State Environmental Planning Policy (Planning Systems) 2021, Schedule 1, sections 13–15.*

*(2) The development application must include evidence that the development—*

*(a) will not use on-site fossil fuels after the occupation and use of the development commence, or*

*(b) incorporates the infrastructure, or space for the infrastructure, necessary for the development to not use on-site fossil fuels after 1 January 2035. Note— Infrastructure includes plant, equipment and ventilation.*

*(3) The development application must include details of the following—*

*(a) any renewable energy generation and storage infrastructure forming part of the development,*

*(b) passive and technical design features that minimise energy consumption by users of the development.*

*(4) The development application must include the following information if available—*

*(a) the estimated annual energy consumption for the building in kilowatt hours per square metre of floor area,*

*(b) the estimated amount of emissions relating to energy use in the building, including direct and indirect emissions.*

*(5) The evidence and information required to be included in a development application under this section must be certified by a mechanical or electrical engineer.*

# Net Zero Statement Technical Note

Department of Planning and Environment  
Net Zero Statement Technical Note



## Net Zero Statement

This note outlines how to prepare a Net Zero Statement when one is required under the NSW Sustainable Buildings SEPP. A Net Zero Statement describes how projects will avoid dependence on fossil fuels and be capable of operating at net zero emissions by 2035.

NSW has whole-of-economy targets to reduce greenhouse gas emissions by 70 per cent by 2035 compared to 2005 levels and reach net zero emissions by 2050. Achieving these targets will require all new and existing buildings in NSW to be operating at net zero well before 2050. The Net Zero Statement is an incremental step to reach these targets.

Clause 35C of the Environmental Planning and Assessment Act Regulation outlines the requirement for certain developments to submit a Net Zero Statement with a development application. This technical note provides guidance to applicants and assessors on content and approach.

### What is a net zero development?

For the purposes of the SB SEPP net zero refers to operational energy only and is associated with building emissions from on-site fossil fuels and electricity consumption. It does not include energy associated with waste or transport. Embodied energy is dealt with separately through the embodied emissions requirements of the SB SEPP.

Net zero operations are achieved by eliminating the use of fossil fuels, improving energy efficiency, generating renewable energy onsite and procuring 100% renewable energy for the remaining energy needs.

Whilst the NSW government encourages the electrification of buildings this is not a requirement. However, buildings that use fossil fuel-dependent systems must provide a transition strategy as part of their net zero statement confirming how the development will operate as fossil fuel-free by 2035.

### How to design for net zero?

Achieving net zero operations involves designing high-performing, energy-efficient buildings that optimise the envelope to reduce

unwanted heat gain/loss, include building systems that reduce energy demand, and provide onsite renewable energy generation to reduce dependence on the electricity grid.

Key considerations for the building envelope include - improved thermal performance through increased insulation, higher glazing performance, increased shading provision and enhanced sealing of the building fabric. Where possible consider orientation of the building to maximise daylight and/or natural ventilation.

Key considerations for building systems include - energy performance of HVAC systems, electrification of energy by converting heat plant for DHW or HHW to heat pumps, optimised lighting layouts with motion sensors and time controls, enhanced lift efficiencies through destination control and reduction of standby power, installation of higher efficiency rated appliances and equipment and reduction of hot water energy consumption through the installation of low flow fixtures, insulation of hot water pipes and heat recovery. Consider the use of local and/or centralised hot water systems depending on hot water usage.

The Net Zero Statement Technical Note outlines how to prepare a Net Zero Statement for large commercial and certain state significant developments (health, education, cultural uses).

The 3-Page Technical Note will be available in September 2023 and is structured under the following headings:

- What is a net zero development?
- How to design for net zero?
- Who can prepare a net zero statement?
- What is included in the net zero statement?
  - Cover letter and verification
  - On-site fossil fuel usage
  - Energy consumption and usage (including calculations)
  - Renewable energy and storage
- Checklist of inclusions
- Further information

### Checklist

<b>Cover Letter</b>	
Project details and overview	<input type="checkbox"/>
Confirm if development is fossil fuel-free or requires a transition strategy.	<input type="checkbox"/>
Certified and signed by a mechanical or electrical engineer	<input type="checkbox"/>
<b>On-Site Fossil Fuel Usage</b>	
If development is fossil fuel-free:	
Provide evidence of fossil fuel-free operations	<input type="checkbox"/>
If development is fossil fuel dependent:	
Provide details of each fossil fuel system used and electrification transition strategy.	<input type="checkbox"/>
Provide evidence the development will operate without fossil fuel by 2035 by confirming it -	<input type="checkbox"/>
Incorporates infrastructure or space for necessary infrastructure to transition - plant, equipment, ventilation etc	<input type="checkbox"/>
<b>Energy Consumption &amp; Use</b>	
Have energy reduction initiatives been described for the following? -	
Passive design features - building orientation, natural ventilation, insulation, glazing performance, air tightness etc.	<input type="checkbox"/>
Technical design features - energy efficient HVAC and lighting systems, smart controls and occupancy sensors etc.	<input type="checkbox"/>
<b>Renewable Energy and Storage</b>	
Have renewable energy or storage initiatives been described? - solar panels, photovoltaics, wind turbines etc.	<input type="checkbox"/>
<b>Estimated Energy Consumption if available</b>	
Estimated fossil fuel consumption per year	<input type="checkbox"/>
Estimated electricity consumption per year	<input type="checkbox"/>
Total estimated energy consumption per year kWh/y/m <sup>2</sup> of GFA	<input type="checkbox"/>
<b>Estimated GHG emissions for energy use if available</b>	
Estimated direct (scope 1) GHG emissions per year	<input type="checkbox"/>
Estimated indirect (scope 2 and 3) GHG emissions per year	<input type="checkbox"/>
Total estimated GHG emissions per year	<input type="checkbox"/>

### Net zero statement for non-residential development

Is the development designed to operate as a net zero development immediately? \*

Yes

No



**[If no]** Is the development designed to incorporate infrastructure, or space for the infrastructure necessary for the development to not use on-site fossil fuels after 1 January 2035? \*

Yes

No

Which of the following net zero provisions has the development incorporated?

- Electric HVAC system
- Future plant space allocated
- Location of current plant room enables future conversion
- Access to plant room enables machinery to be changed over
- Electrified services and appliances
- Renewable energy generation and storage
- Other {please list}

What is the estimated annual energy consumption for the building?  kWh/m<sup>2</sup>

What is the estimated amount of emissions relating to energy use in the building, including direct and indirect emissions?  kgCO<sub>2</sub>e/m<sup>2</sup> p.a.

[Prompt to upload Net Zero Statement](#)



# Net Zero Statement process

## Applicant steps

- Review policy provision and technical note relating to net zero statement - discuss with project team if aiming to operate Net Zero immediately or to transition by 2035.
- **DA** - Mechanical or services engineer to prepare Net Zero Statement, including cover sheet and key calculations.
- **DA** - Upload Net Zero Statement and fill in key data fields on the NSW Planning Portal.

# Net Zero Statement process

## Applicant steps

- Review policy provision and technical note relating to net zero statement - discuss with policy team if aiming to operate Net Zero immediately or to transition by 2035.
- **DA** - Mechanical or services engineer to prepare Net Zero Statement, including cover sheet and key calculations.
- **DA** - Upload Net Zero Statement and fill in key data fields on the NSW Planning Portal.

## Assessor steps

- Confirm that the project is large commercial and that the SEPP applies.
- **DA** - Check that a Net Zero Statement has been uploaded to the NSW Planning Portal. Rely on the verification by qualified professional. Where practical, cross check that the information provided in the statement is reflected in drawings and specifications.

# 4. Water Standards

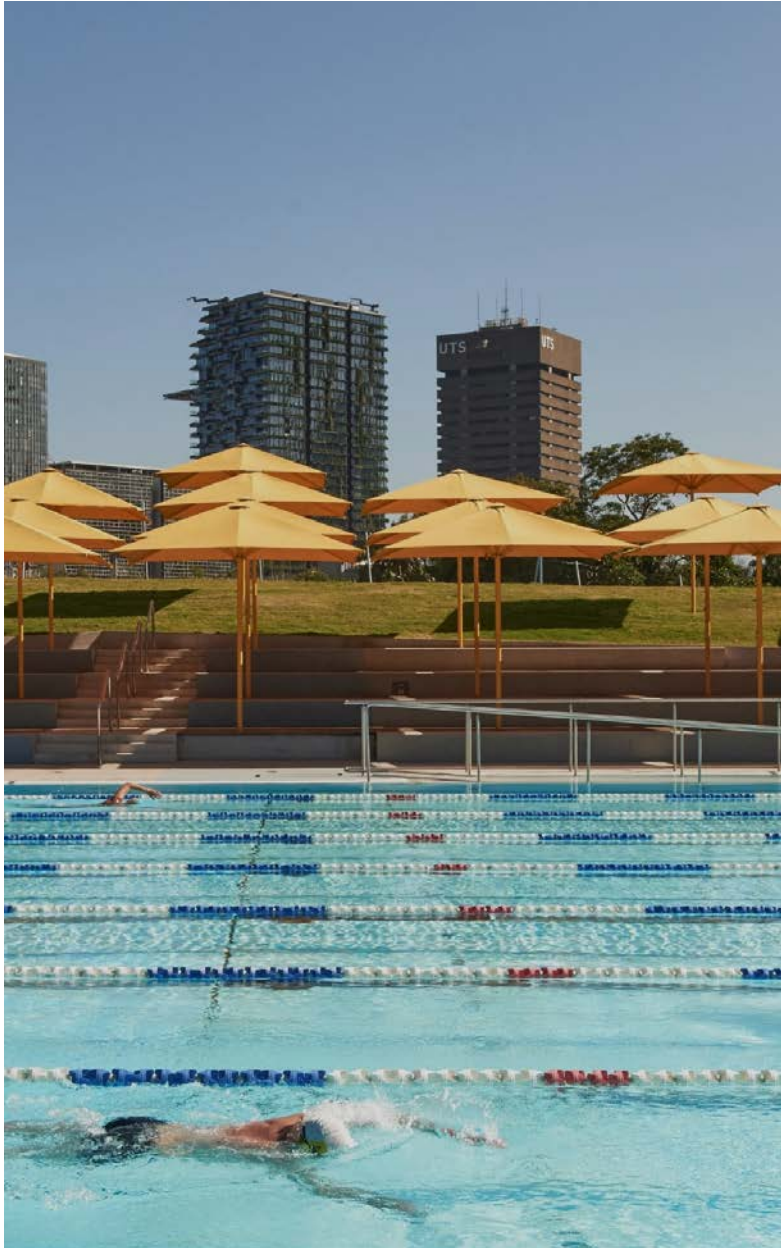


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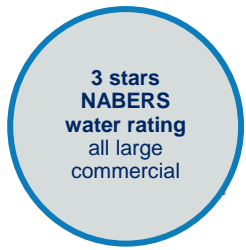
**Policy provisions for large commercial development**  
September 2023

**Jillian Hopkins**  
Principal Design Advisor  
GANSW





# Water Standards



Measure	Energy standards and offsets
Policy requirement	<p>At DA, enter a commitment agreement. At CC, report on progress.</p> <p>After OC, demonstrate 24 months after OC that the development has achieved the water standards</p>
Application	Prescribed Large Commercial only
SEPP reference:	Clause 3.3 for Large Commercial
Regulation reference:	Schedule 2 (79A) Energy requirements – condition of DA consent
<p>What's new?</p> <div data-bbox="945 1029 1141 1286" style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Agreement to rate</p> </div>	<p>NABERS Agreement to rate, relating to water, established.</p> <p>Water related questions integrated into planning portal at all phases.</p> <p>Extension of time (1 year) enabled to account for unforeseen circumstances.</p>



## Policy provision - extract

### State Environmental Planning Policy (Sustainable Buildings 2022)

#### 3.3 Other considerations for large commercial development

(2) Development consent must not be granted to large commercial development unless the consent authority is satisfied the development is capable of achieving the standards for energy and water use specified in Schedule 3.

(3) For the purposes of subsection (2), development is capable of achieving a standard specified in Schedule 3 if there is a NABERS commitment agreement in place to achieve the standard.

### Schedule 3 Standards for energy and water use for large commercial development

#### 2 Water use

The standard for water use for large commercial development is a 3 star NABERS water rating.

## DA – extract

### Amendment of Environmental Planning and Assessment Regulation 2021

#### 35D Energy and water use for large commercial development under Sustainable Buildings SEPP

(2) The development application must be accompanied by a copy of a NABERS commitment agreement that demonstrates the development is capable of achieving the standards for energy and water use specified in State Environmental Planning Policy (Sustainable Buildings) 2022, Schedule 3.

## CC - extract

### Amendment of Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

#### 10B Energy and water use standards for large commercial development under Sustainable Buildings SEPP

(2) The application must be accompanied by reports about the standards for energy and water use achieved by the development, taking into account the standards specified in State Environmental Planning Policy (Sustainable Buildings) 2022, Schedule 3.

(5) The report for water use may be in the form of annotated drawings and specifications.

## Digital update – Water – DA & CC

### Water - DA

Have NABERS Agreement(s) to Rate relating to water use been prepared for each prescribed large commercial use in the development?

Yes

No

This application must be accompanied by a NABERS Agreement to Rate to demonstrate the development is capable of achieving the SB SEPP water standards. For mixed use development, separate agreements are required for each prescribed large commercial use.

Enter details of the Agreement(s): \*

Type of Agreement	Targeted Star Rating	Agreement Reference
<input checked="" type="checkbox"/> NABERS Agreement to Rate (Office)	5.5 stars	AR12345
<input type="checkbox"/> NABERS Agreement to Rate (Hotel)	4.0 stars	AR12345
<input checked="" type="checkbox"/> NABERS Agreement to Rate (Motel)	4.5 stars	AR12345
<input type="checkbox"/> NABERS Agreement to Rate (Serviced Apartment)	4.0 stars	AR12345

### Water - CC

What method has been carried out to produce the required water report?

- Annotated drawings
- Specifications
- Other

Provide details and document references for the water report.

# Water Standards process

## Applicant steps

- Enter into a NABERS Agreement to Rate for each large commercial development type impacted by the water standards, including upfront payment of fee.
- **At DA** - Upload NABERS Agreement to Rate and fill in key data fields on the NSW Planning Portal relating to water use.
- **At CC or crown building works** – Answer key data fields relating to water use and cross reference existing specifications and drawings that demonstrate progress.
- **At 24 months after occupation** – Liaise with NABERS to finalise water rating, and upload NABERS certificate to demonstrate onto the NSW Planning Portal.

# Water Standards process

## Applicant steps

- Enter into a NABERS Agreement to Rate for each large commercial development type impacted by the water standards, including upfront payment of fee.
- **At DA** - Upload NABERS Agreement to Rate and fill in key data fields on the NSW Planning Portal relating to water use.
- **At CC or crown building works** – Answer key data fields relating to water use and cross reference existing specifications and drawings that demonstrate progress.
- **At 24 months after occupation** – Liaise with NABERS to finalise water rating, and upload NABERS certificate to demonstrate onto the NSW Planning Portal.

## Assessor steps

- Confirm that the project is large commercial or prescribed state significant, and that the SEPP applies.
- **At DA** - Check that a NABERS Agreement to Rate for each large commercial development type impacted by the water standards has been uploaded including upfront payment of fee, and that the targeting star rating aligns with the SB SEPP standard.
- **At CC or crown building works** – Check that relevant data fields have been answered in the NSW Planning Portal and that any measures to reduce water consumption have been reflected in the identified specification or drawings.
- **At 24 months after occupation** – Check that NABERS water rating has been achieved (and certificate uploaded) – cross check on NABERS website.



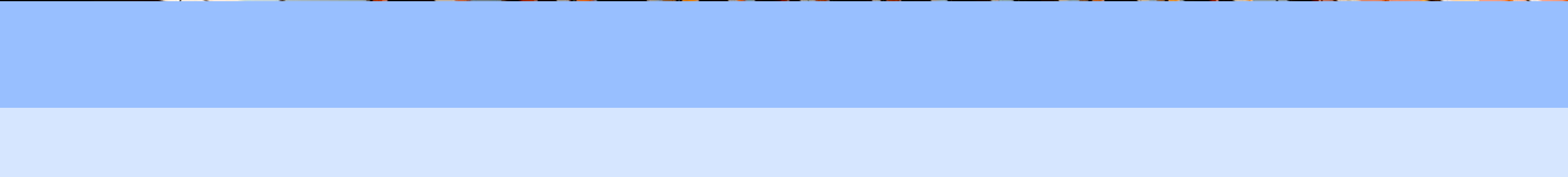
# 5. Energy Standards

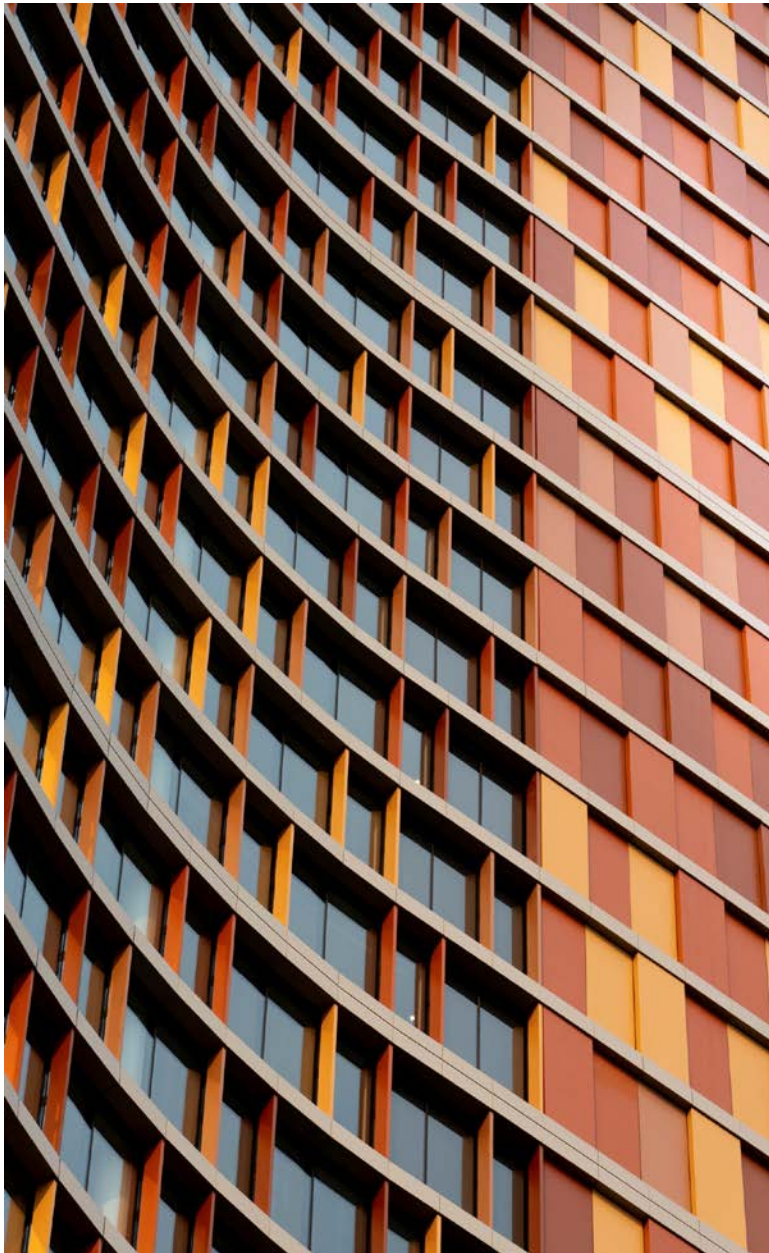


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**Policy provisions for large commercial development**  
September 2023

**Jillian Hopkins**  
Principal Design Advisor  
GANSW

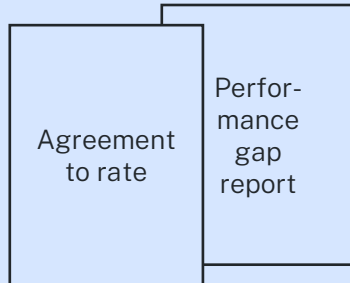




# Energy Standards + Offsets



Measure	Energy standards and offsets
Policy requirement	<p>At DA, enter a commitment agreement. At CC, report on progress and submit Section J report.</p> <p>After OC, demonstrate 24 months after OC that the development:</p> <ul style="list-style-type: none"> <li>• Has achieved the energy standards</li> <li>• Has purchased offsets for any performance gap</li> <li>• Has purchased offsets for any on site fossil fuel use.</li> </ul>
Application	Prescribed Large Commercial only
SEPP reference:	Clause 3.3 for Large Commercial
Regulation reference:	Schedule 2 (79A) Energy requirements – condition of DA consent
What's new?	<p>NABERS Agreement to rate, relating to energy, established. NSW Performance Gap Assessment template in development.</p> <p>Energy related questions integrated into planning portal at all phases. Extension of time (1 year) enabled to account for unforeseen circumstances.</p> <p>SEPP exemptions for City of Sydney hotels / motels / offices – to direct these development types to the city's energy standards.</p>



## Policy provision - extract

### State Environmental Planning Policy (Sustainable Buildings 2022)

#### 3.3 Other considerations for large commercial development

(2) Development consent must not be granted to large commercial development unless the consent authority is satisfied the development is capable of achieving the standards for energy and water use specified in Schedule 3.

(3) For the purposes of subsection (2), development is capable of achieving a standard specified in Schedule 3 if there is a NABERS commitment agreement in place to achieve the standard.

(4) Subsection (2), to the extent it relates to energy use, does not apply to large commercial development on land to which the following local environmental plans apply—

- (a) [Sydney Local Environmental Plan 2012](#),
- (b) [Sydney Local Environmental Plan \(Green Square Town Centre\) 2013](#),
- (c) [Sydney Local Environmental Plan \(Green Square Town Centre — Stage 2\) 2013](#).

(5) Despite subsection (4), subsection (2) applies to large commercial development to the extent that the development relates to prescribed serviced apartments.

### Schedule 3 Standards for energy and water use for large commercial development

#### 1 Energy use

(1) The standard for energy use for development for the purposes of prescribed office premises is a 5.5 star NABERS energy rating.

(2) The standard for energy use for development for the purposes of prescribed hotel or motel accommodation is a 4 star NABERS energy rating.

(3) The standard for energy use for development for the purposes of prescribed serviced apartments is a 4 star NABERS energy rating.

(4) To avoid doubt, different standards may apply to the same building if it is used for different purposes.

## DA - extract

### Amendment of Environmental Planning and Assessment Regulation 2021

#### 35D Energy and water use for large commercial development under Sustainable Buildings SEPP

(2) The development application must be accompanied by a copy of a NABERS commitment agreement that demonstrates the development is capable of achieving the standards for energy and water use specified in State Environmental Planning Policy (Sustainable Buildings) 2022, Schedule 3.

(3) The development application must identify the method under Section J of the Building Code of Australia that will be used to demonstrate the development is capable of achieving the standards for energy use specified in State Environmental Planning Policy (Sustainable Buildings) 2022, Schedule 3.

## CC - extract

### Amendment of Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021

#### 10B Energy and water use standards for large commercial development under Sustainable Buildings SEPP

(2) The application must be accompanied by reports about the standards for energy and water use achieved by the development, taking into account the standards specified in State Environmental Planning Policy (Sustainable Buildings) 2022, Schedule 3.

(3) The report for energy use must be in the form of a report under Section J of the Building Code of Australia.

(4) The report for energy use may also—

- (a) refer to a performance-based design solution under Section J of the Building Code of Australia, or
- (b) incorporate a review by a member of an independent review panel under the National Australian Built Environment Rating System, known as NABERS.


### Energy - DA

What is the preferred Section J pathway for this development? \*

- J1V1 NABERS Energy
- J1V2 Green Star
- J1V3 Verification using a reference building
- J1V4 Verification of building envelope sealing

**Note: auto-prompt to upload Section J report will appear at CC.**

Is the development in the City of Sydney Local Government area?

- Yes  
 No
- 
**[If yes]** development is exempt from further energy requirements and can proceed to next stage.

**Note: this exemption question will be repeated at CC.**

### Energy - DA

Have NABERS Agreement(s) to Rate or Commitment Agreement relating to energy use been prepared for each prescribed large commercial use in the development? \* What is this?

- Yes  
 No

This application must be accompanied by a NABERS Agreement to Rate to demonstrate the development is capable of achieving the SB SEPP water standards. For mixed use development, separate agreements are required for each prescribed large commercial use.

Enter details of the Agreement(s): \*

Type of Agreement	Target Rating	Agreement Reference
<input type="checkbox"/> NABERS Commitment Agreement (Office)	5.5 stars	CA1234
<input type="checkbox"/> NABERS Commitment Agreement (Hotel)	4.0 stars	CA1234
<input checked="" type="checkbox"/> NABERS Commitment Agreement (Motel)	4.5 stars	CA1234
<input type="checkbox"/> NABERS Commitment Agreement (Serviced Apartment)	4.0 stars	CA1234
<input checked="" type="checkbox"/> NABERS Agreement to Rate (Office)	5.5 stars	AR12345
<input type="checkbox"/> NABERS Agreement to Rate (Hotel)	4.0 stars	AR12345
<input type="checkbox"/> NABERS Agreement to Rate (Motel)	4.5 stars	AR12345
<input type="checkbox"/> NABERS Agreement to Rate (Serviced Apartment)	4.0 stars	AR12345



# Energy Standards - Offsets



## DA Condition – extract

### Amendment of Environmental Planning and Assessment Regulation 2021

#### 79A Energy and water use for large commercial development under Sustainable Buildings SEPP

*(2) It is a condition of the development consent that, within the relevant period, the following must be given to the consent authority using the NSW planning portal –*

- (a) an assessment of the NABERS rating for water use achieved by the development, prepared by an assessor accredited by NABERS,
- (b) an assessment of the NABERS rating for energy use achieved by the development, prepared by an assessor accredited by NABERS,
- (c) evidence that the offsets required for the development under this section have been –
  - (i) for ACCUs or large-scale generation certificates – purchased and surrendered, or
  - (ii) for Climate Active certification – obtained.

*(3) The assessment under subsection (2)(b) must specify the following –*

- (a) the rated annual electricity use,
- (b) if the development will not achieve the energy use standards – the difference between the rated annual electricity use and the energy use standards, calculated for the first 5 years of operation,
- (c) the rated use of on-site fossil fuels and the associated amount of carbon dioxide measured as carbon dioxide equivalent or CO<sub>2</sub>e, calculated for the first 10 years of operation.

*(4) The consent authority must determine –*

(a) the type of offsets required for particular development according to the following –

- the (i) ACCUs or Climate Active certification may be required if the consent authority is satisfied development will use on-site fossil fuels,
- the (ii) large-scale generation certificates may be required if the consent authority is satisfied development will not achieve the energy use standards, and (b) the number of offsets required for particular development, using the assessment provided under subsection (2)(b).

**Note: policy amendment in progress to provide an option for 1 year extension of time.**

# Energy Offsets



**To offset any on-site fossil fuel use:**

**Australian Carbon Credit Units**  
(10 year calculation)

ACCUs, issued by the Clean Energy Regulator, purchased and surrendered for a period of 10 years, paid upfront.

**Climate Active Carbon Neutral Certification**

Certification must be obtained for the project, precinct or business and sustained over time. NABERS has a pathway to achieve this.

**To offset any energy performance gap:**

**Large Scale Generation Certificates**  
(5 year calculation)

LGCs are issued by the Clean Energy Regulator, must be purchased and surrendered for a period of 5 years, paid upfront.

# Energy Standards process

## Applicant steps

- Enter into a NABERS Agreement to Rate or NABERS Commitment Agreement for each large commercial development type.
- **At DA** - Upload NABERS Agreement to Rate, fill in data fields relating to energy use and identify Section J pathway in NSW planning portal.
- **At CC or crown building works** – Answer data fields relating to energy use and upload Section J report to NSW Planning Portal.
- **At 24 months after occupation** – Finalise NABERS energy rating and upload NABERS certificate onto NSW Planning Portal. Prepare Performance Gap report and purchase offsets required.
- **Note: 1 year extension of time may be permitted.**

# Energy Standards process

## Applicant steps

- Enter into a NABERS Agreement to Rate or NABERS Commitment Agreement for each large commercial development type.
- **At DA** - Upload NABERS Agreement to Rate, fill in data fields relating to energy use and identify Section J pathway in NSW planning portal.
- **At CC or crown building works** – Answer data fields relating to energy use and upload Section J report to NSW Planning Portal.
- **At 24 months after occupation** – Finalise NABERS energy rating and upload NABERS certificate onto NSW Planning Portal. Prepare Performance Gap report and purchase offsets required.
- **Note: 1 year extension of time may be permitted.**

## Assessor steps

- Confirm that the project is large commercial or prescribed state significant, and that the SEPP applies.
- **At DA** - Check that a NABERS Agreement to Rate for each large commercial development type impacted by the energy standards has been uploaded including upfront payment of fee, and that the targeting star rating aligns with the SB SEPP standard.
- **At CC or crown building works** – Check that relevant data fields answered and Section J report uploaded to NSW Planning Portal.
- **At 24 months after occupation** – check that NABERS energy rating is achieved and certificate uploaded – cross check on NABERS website. Check that Performance Gap report has been prepared and any offsets purchased for the required period.
- **Note: 1 year extension of time may be granted.**

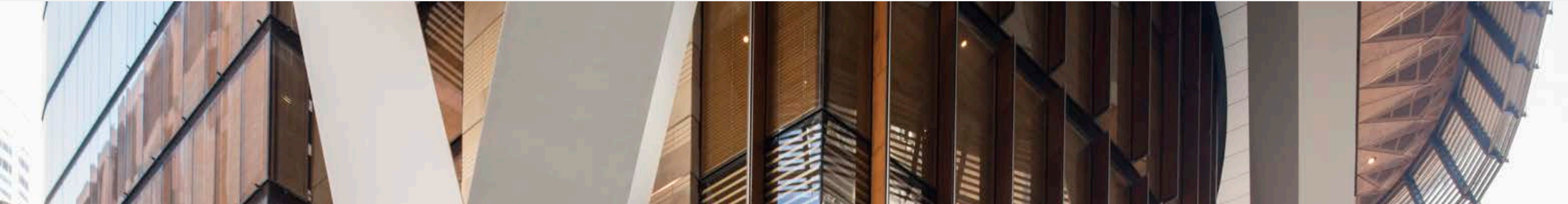
# Sustainable Buildings SEPP



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**Conclusion and Q&A**  
September 2023


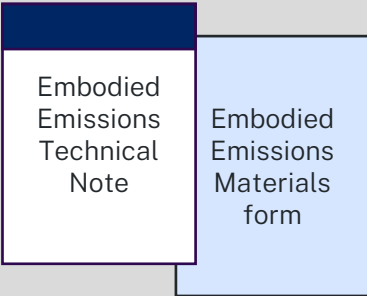
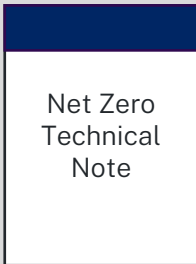
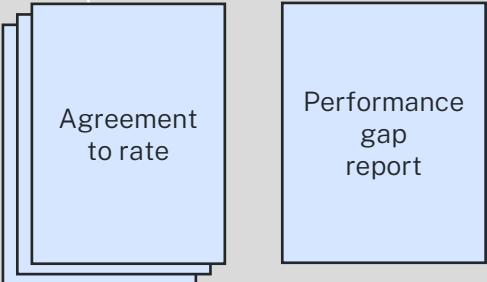
**Abbie Galvin**  
Government Architect NSW





# Summary

## Non residential policy provisions

1. General sustainability	2. Embodied emissions	3. Net Zero Statement	5. Water Standards	4. Energy Standards
				

# Timeline





# Q & A

## Pre-registered questions:

- What are the cost impacts of the new policy measures?
- Have heritage buildings been considered when preparing for the transition to net zero?
- What are the expected policy updates in 2025 relating to non-residential development?
- What is the relationship between the Department's embodied emissions reporting approach and the Green Star Emissions Calculator?
- How will low emissions materials like mud brick be considered in the emissions reporting?
- Can Councils set higher energy targets under the SEPP?





Thank you!

For more information  
on the Sustainable  
Buildings SEPP:

<https://www.planning.nsw.gov.au/policy-and-legislation/buildings/sustainable-buildings-sepp>